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# **WATER SUPPLY OUTLOOK FOR OREGON**

Prepared by  
**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**  
Collaborating with  
**OREGON STATE UNIVERSITY**  
and  
**STATE ENGINEER of OREGON**

Data included in this report were obtained by the agencies named above  
in cooperation with other Federal, State and private organizations.

AS OF  
**JUNE 1, 1973**



## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



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# **WATER SUPPLY OUTLOOK FOR OREGON**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued*

JUNE 8, 1973

*Issued by*

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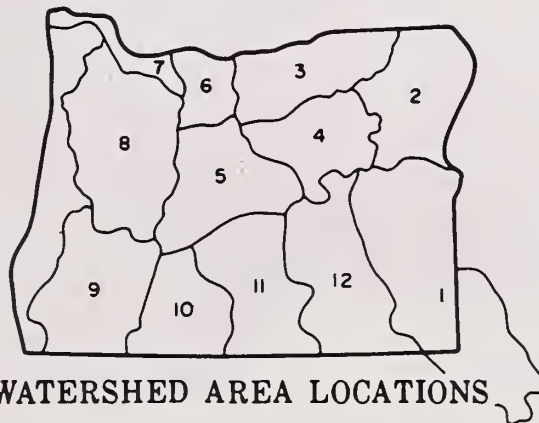
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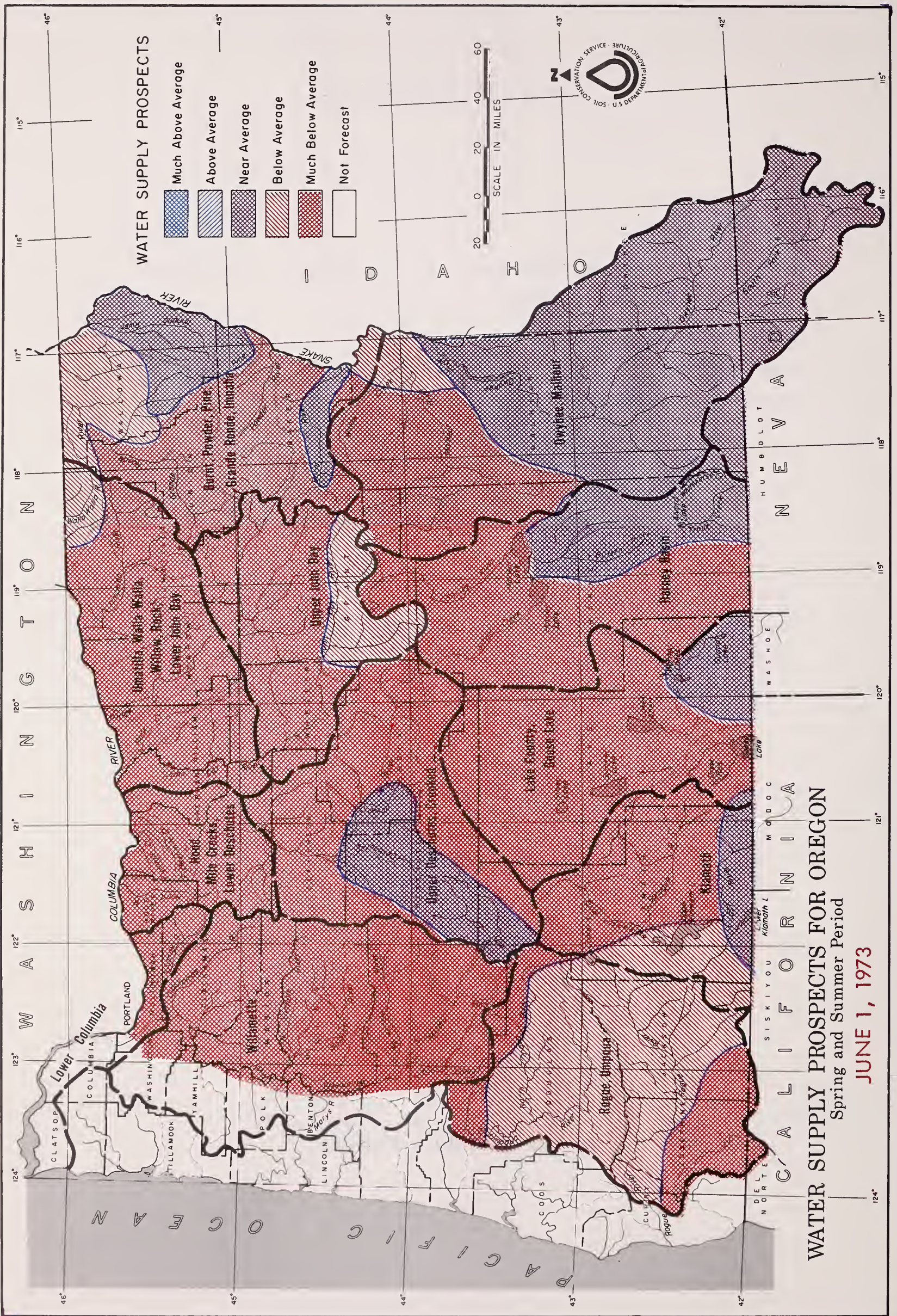


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# WATER SUPPLY OUTLOOK for OREGON

JUNE 1, 1973

Oregon's water supply outlook for this summer is for near average conditions in most areas that have access to stored water supplies, and much below average for users dependent on direct diversion. The snow cover is gone. Precipitation for the past six months has been very low. Streamflow this summer will be generally poor in most areas.

## SNOW COVER

The snow cover as of June 1 was practically nonexistent. Snow depths were recorded at only 5 snow courses on Mt. Hood, Bachelor Butte, and in Crater Lake National Park. There is less snow now than there was on June 1, 1968, which was an extremely low runoff year.

## PRECIPITATION

Rainfall during May continued the very dry trend which started last winter. Precipitation for the past month was 30 to 50% of normal in Western Oregon and ranged from 50 to 90% east of the Cascades.

## RESERVOIR STORAGE

Twenty-five of Oregon's major irrigation reservoirs are storing 2,515,900 acre feet of water. This is less than last year and about average for June 1. Much of this water will be used for irrigation this summer. Carryover storage for next year will be less than normal.

## STREAMFLOW

Oregon's rivers and streams produced low amounts of water during May. Lack of precipitation and an extremely low snowpack were the contributing factors. These low flows will probably continue for the rest of the water year.

continued on next page

continued -

Representative forecasts of summer streamflow are as follows:

NAME	PERIOD	FORECAST
		% 1953-67 Average
Owyhee Net Inflow	May-July	87
Grande Ronde at La Grande	May-July	39
Umatilla at Pendleton	May-July	36
Mid. Fk. Willamette blw. No. Fk. near Oakridge	May-July	59
Rogue at Raygold	May-July	60
Upper Klamath Lake Net Inflow	May-July	55

This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, NOAA National Weather Service, and other cooperators.





June 1, 1973

## STREAMFLOW FORECASTS

STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <i>i</i>
OWYHEE, MALHEUR WATERSHEDS					
Bully Creek at Warm Springs	6.4	56	March-May	11.1	11.4
Jordan Creek above Lone Tree Creek	37.5	78	May-July		48
Malheur near Drewsey	10.8	33	May-July	35	33
	11.8	35	May-Sept.	36	34
Malheur, North Fork at Beulah <sup>d</sup>	15.0	45	May-July	36	33
	18.0	47	May-Sept.	41	38
Owyhee Reservoir net Inflow <sup>k</sup>	140	87	May-July	176	160
	157	88	May-Sept.	200	179
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Bear near Wallowa	35	64	May-Sept.		57
Burnt near Hereford <sup>d</sup>	3.6	25	May-July		14.3
	4.0	26	May-Sept.		15.5
Catherine near Union	26	50	May-Sept.		52
Eagle Creek above Skull Creek	143	100	May-July		143
	156	100	May-Sept.		156
Grande Ronde at La Grande	39	39	May-July	134	101
	41	39	May-Sept.	138	105
Hurricane Creek near Joseph	35	80	May-Sept.		45
Imnaha at Imnaha	181	80	May-Sept.		225
Lostine near Lostine	93	80	May-Sept.		116
Powder River near Sumpster	20	51	May-July		39
	21	53	May-Sept.		40
Wallowa, East Fork near Joseph <sup>d</sup>	6.9	80	May-July		8.7
	8.9	80	May-Sept.		11.2
UMATILLA, WALLA WALLA, ROCK, LOWER JOHN DAY WATERSHEDS					
Birch Creek at Rieth	3.6	41	May-July	9.5	8.9
Butter Creek near Pine City	1.0	75	May-July	4.6	4.0
McKay near Pilot Rock	3.4	31	May-Sept.		11.0
Umatilla River near Gibbon	18.0	43	May-July	55	42
	24	50	May-Sept.	62	48
Umatilla River at Pendleton	36	48	May-July	97	75
	42	53	May-Sept.	101	80
Walla Walla, So. Fork near Milton	27	72	May-July	51	38
	39	78	May-Sept.	67	50
UPPER JOHN DAY WATERSHEDS					
Camas Creek near Ukiah	5.5	29	May-July		19.5
	5.8	29	May-Sept.		20
John Day at Prairie City	20	68	May-July		30
	23	69	May-Sept.		34
John Day, Middle Fork at Ritter	43	61	May-July		70
	45	61	May-Sept.		74
John Day, North Fork at Monument	203	56	May-July		362
	212	56	May-Sept.		377
Strawberry near Prairie City	5.4	75	May-July		7.2
	5.9	75	May-Sept.		7.9

June 1, 1973

## STREAMFLOW FORECASTS

STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average i.
UPPER DESCHUTES, CROOKED WATERSHEDS					
Beaver Creek near Paulina	4.8	73	May-July		6.7
	5.3	76	May-Sept.		7.0
Crane Prairie Reservoir total Inflow	46	67	May-July	103	68
	76	68	May-Sept.	175	111
Crescent at Crescent Lake <sup>d</sup>	9.1	49	May-July		18.5
	11.0	46	May-Sept.		24
Crooked near Post	13.0	34	May-July		38
	14.0	35	May-Sept.		40
Deschutes at Benham Falls <sup>d</sup>	246	81	May-July		305
	420	83	May-Sept.		509
Deschutes below Snow Creek	44	74	May-Sept.	103	59
Deschutes, Little near La Pine <sup>d</sup>	23	37	May-July	83	61
	28	39	May-Sept.	101	73
Ochoco Reservoir net Inflow	3.0	25	May-Sept.		12.1
Odell near Crescent	18.6	75	May-Sept.		25
Squaw near Sisters	28	79	May-Sept.	63	47
Tumalo near Bend <sup>d</sup>	36	77	May-Sept.	54	43
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Hood near Tucker Bridge	95	50	May-July		189
	132	54	May-Sept.		243
Hood, West Fork near Dee	50	55	May-July		90
	70	63	May-Sept.		112
White below Tygh Valley	34	39	May-July		86
	43	41	May-Sept.		103
LOWER COLUMBIA WATERSHEDS					
Columbia at The Dalles <sup>d</sup>	44,150	74	May-June		59,688
	69,350	75	May-Sept.		92,457
Sandy River near Marmot	138	58	May-July		239
	189	65	May-Sept.		293
WILLAMETTE WATERSHEDS					
Clackamas at Estacada	273	60	May-July		455
	340	60	May-Sept.		566
Clackamas above Three Lynx	181	52	May-July		348
	265	60	May-Sept.		442
McKenzie at McKenzie Bridge	214	63	May-July		338
	330	68	May-Sept.		487
McKenzie near Vida	411	54	May-July		754
	597	60	May-Sept.		989
McKenzie, So. Fork near Rainbow	73	49	May-July		148
	102	57	May-Sept.		178
Oak Grove Fork above Power Intake	55	61	May-July		90
	89	69	May-Sept.		128
Row near Dorena	35	61	May-July		58
	39	63	May-Sept.		62
Santiam, North at Mehama <sup>d</sup>	216	42	May-July		513
	324	52	May-Sept.		614
Santiam, South at Waterloo	141	42	May-July		337
	195	52	May-Sept.		375
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge <sup>d</sup>	284	59	May-July		490
	367	62	May-Sept.		593
Willamette, N. Fk. of Mid. Fk. near Oakridge	76	60	May-July		126
	93	63	May-Sept.		147
Willamette at Salem <sup>d</sup>	1544	55	May-July		2783
	2104	64	May-Sept.		3286



June 1, 1973

## STREAMFLOW FORECASTS

STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average i.
ROGUE, UMPQUA WATERSHEDS					
Applegate near Copper	35	42	May-July		83
	42	47	May-Sept.		90
Clearwater above Trap Creek <sup>d</sup>	58	96	May-Sept.		60
Fourmile Lake net Inflow	2.8	99	May-July		2.9
	3.1	110	May-Sept.		2.9
Hyatt Reservoir net Inflow <sup>d</sup>	1.6	71	May-July		2.4
Illinois River near Kerby	46	50	May-July		93
	49	50	May-Sept.		99
Little Butte, N. Fk. at Fish Lake nr. Lake Cr. <sup>d</sup>	7.5	61	May-Sept.		12.3
Little Butte, S. Fk. near Lake Creek	9.2	49	May-July	13.1	19.2
	11.1	51	May-Sept.	16.4	22
Rogue above Prospect	111	58	May-July		192
	154	62	May-Sept.		249
Rogue, South Fork near Prospect <sup>d</sup>	28	61	May-July		46
	38	67	May-Sept.		57
Rogue at Raygold near Central Point	316	60	May-July		525
	439	64	May-Sept.		685
Rogue at Grants Pass	414	62	May-Sept.		662
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls <sup>d</sup>	94	64	May-Sept.		147
KLAMATH WATERSHEDS					
Clear Lake Reservoir Inflow	10.8	72	May-Sept.		15.1
Gerber Reservoir Inflow	2.2	44	May-Sept.		5.0
Sprague near Chiloquin	107	51	May-Sept.		208
Upper Klamath Lake net Inflow <sup>k</sup>	230	55	May-Sept.	389	419
Williamson below Sprague River	181	56	May-Sept.		331
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Chewaucan near Paisley	38	66	May-July	55	58
	40	64	May-Sept.	59	62
Deep above Adel	37	88	May-July	53	42
	38	85	May-Sept.	55	44
Drews Reservoir net Inflow <sup>d</sup>	6.0	54	May-July		11.3
Honey near Plush	5.8	56	May-July	10.0	10.5
	7.2	67	May-Sept.	10.2	10.7
Silver Creek near Silver Lake	6.0	50	May-July	14.2	12.1
	7.0	50	May-Sept.	18.4	14.0
Twentymile near Adel	8.5	89	May-July		9.6
	8.6	86	May-Sept.		10.0
HARNEY BASIN WATERSHEDS					
Donner und Blitzen near Frenchglen	36	91	May-July		40
	42	93	May-Sept.		45
Silver near Riley	3.0	45	May-July		6.7
Silvies near Burns	16.3	42	May-July	29	39
	19.5	48	May-Sept.	31	41
Trout near Denio	6.0	109	May-July	6.1	5.5
	6.3	105	May-Sept.	6.8	6.0
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.					

June 1, 1973

## RESERVOIR STORAGE (Thousand Ac. Ft.)

END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average i
OWYHEE, MALHEUR WATERSHEDS				
Antelope	70.0		- -	37.3
Beulah Reservoir	60.0	33.4	52.5	48.8
Bully Creek	30.0	15.6	22.5	18.6
Owyhee	715.0	693.1	713.5	517.0
Warm Springs	191.0	108.0	180.2	131.9
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS				
Phillips Lake	73.5	47.9	71.3	- -
Thief Valley	17.4	16.3	17.4	- -
Unity	25.2	18.3	24.7	22.3
Wallowa Lake	37.5	13.2	22.4	30.6
UMATILLA, WALLA WALLA, WILLOW, ROCK LOWER JOHN DAY WATERSHEDS				
Cold Springs	50.0	36.4	50.0	48.0
McKay	73.8	31.7	67.8	62.1
UPPER DESCHUTES, CROOKED WATERSHEDS				
Crane Prairie	55.3	36.2	55.5	42.4
Crescent Lake	86.9	90.3	89.8	51.9
Ochoco	47.5	23.0	46.4	37.9
Prineville	153.0	144.8	153.5	146.8
Wickiup	200.0	145.1	192.3	172.0
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS				
Clear Lake (Wasco)	11.9	5.8	12.7	4.8
WILLAMETTE WATERSHEDS				
Blue River	85.6*	76.5	80.8	- -
Cottage Grove	30.0*	28.5	28.8	27.6
Cougar	155.2*	133.8	146.5	- -
Detroit	299.9*	233.3	291.2	268.9
Dorena	70.5*	65.8	65.2	63.6
Fall Creek	115.0*	108.8	113.6	- -
Fern Ridge	94.2*	85.9	94.7	89.8
Foster	30.0*	24.7	25.3	- -
Green Peter	270.0*	238.3	250.1	- -
Hills Creek	200.0*	179.1	194.3	187.6
Lookout Point	337.2*	216.4	323.9	327.4
Timothy Lake	61.7	61.7	61.5	59.4
*Multiple purpose reservoir--space reserved primarily for flood runoff.				

## RESERVOIR STORAGE (Thousand Ac. Ft.)

END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average i
ROGUE, UMPQUA WATERSHEDS				
Emigrant Lake	39.0	32.6	35.9	35.6*
Fish Lake	8.0	7.2	8.1	6.9
Fourmile Lake	16.1	15.0	14.7	13.0
Howard Prairie	60.0	50.8	60.6	44.6
Hyatt Prairie	16.1	12.6	15.7	15.2
*Average for years of record (in base period) after reconstruction.				
KLAMATH WATERSHEDS				
Clear Lake	440.2	310.5	398.2	242.2
Gerber	94.0	62.7	85.8	61.9
Upper Klamath Lake	584.0	501.3	559.4	538.3
LAKE COUNTY, GOOSE LAKE WATERSHEDS				
Cottonwood	8.7	8.6	8.5	6.6*
Drews	63.0	58.0	61.3	52.8
*Average for years of record (in base period) after reconstruction.				
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.				



JUNE 1, 1973

SNOW		THIS YEAR			PAST REC.		SNOW		THIS YEAR			PAST REC.	
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)		DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)			
				Last Yr.	Ave. 2					Last Yr.	Ave. 2		
Annie Spring	5/30	8	3.7	27.9	- -								
Billie Creek Divide	6/1	0	0.0	0.0	- -								
Blue Mountain Camp	5/29	0	0.0	0.0	- -								
Cascade Summit	5/30	0	0.0	13.2	6.9 <sup>m</sup>								
Clear Lake	5/24	0	0.0	0.0	T <sup>m</sup>								
Clear Lake (Experimental	5/24	0	0.0	0.0	0.3 <sup>m</sup>								
Cold Springs Camp	5/29	0	0.0	20.4	- -								
Cold Springs Pillow*	6/1	0	0.0	- -	- -								
Detroit (City)	6/1	0	0.0	0.0	- -								
Detroit Dam	6/1	0	0.0	0.0	- -								
Diamond-Crater Summit	5/31	0	0.0	12.9	- -								
Diamond-Crater Sum. Alt.	5/31	0	0.0	17.8	- -								
Diamond Lake	5/31	0	0.0	2.3	- -								
Diamond Lake Junction	5/31	0	0.0	0.0	- -								
Fourmile Lake	5/31	0	0.0	0.0	- -								
Hogg Pass	6/1	0	0.0	42.4	- -								
Hungry Flat	5/26	0	0.0	0.0	- -								
Irish-Taylor Pillow*	b												
Lookout Point Dam	5/30	0	0.0	0.0	0.0 <sup>m</sup>								
Marion Forks	6/1	0	0.0	0.0	- - <sup>h</sup>								
McCredie Springs	5/30	0	0.0	0.0	0.0 <sup>h</sup>								
Mill City	6/1	0	0.0	0.0	- -								
Mt. Hood Test Site Pillow	5/29	35	18.2	- -	- -								
New Dutchman Flat #2	5/26	16	9.0	77.4	- -								
Oakridge	5/30	0	0.0	0.0	0.0 <sup>m</sup>								
Olive Lake <sup>e</sup>	5/30	0	0.0	- -	- -								
Park Headquarters	5/30	34	16.8	69.8	- -								
Peavine Ridge Pillow*	6/1	0	0.0	- -	- -								
Phlox Point	5/24	19	9.5	82.1	43.6 <sup>m</sup>								
Quartz Mountain	6/1	0	0.0	0.0	- -								
Quartz Mountain (Ext.)	6/1	0	0.0	0.0	- -								
Railroad Overpass	5/30	0	0.0	0.0	0.0 <sup>h</sup>								
Saddle Mtn. Pillow*	6/1	0	0.0	- -	- -								
Salt Creek Falls	5/30	0	0.0	0.0	0.7 <sup>m</sup>								
Santiam Junction	6/1	0	0.0	0.0	- -								
Seine Creek Pillow*	6/1	0	0.0	- -	- -								
Snow Mountain Pillow*	6/1	0	0.0	- -	- -								
Still Creek	5/24	0	0.0	9.7	2.4 <sup>m</sup>								
Still Creek Alt. #2	5/24	0	0.0	14.1	- -								
Tangent	5/26	0	0.0	0.0	- -								
Three Creek Meadow*	6/1	0	0.0	- -	- -								
Tollgate	5/29	0	0.0	2.4	0.7 <sup>m</sup>								
Weston Mountain	5/29	0	0.0										

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBK records. (m) Average of 5 or more years in base period.

# BASIC DATA SUPPLEMENT 2

JUNE 1, 1973

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	c			
Big Bend (Nev.)	6700	48	16.7	c			
Blue Mountain Spring	5900	42	16.9	b		10.6	13.3
Crane Prairie	5375	48	18.2	b		17.6	17.8
Jordan Valley	4390	48	19.3	c			
Mud Flat (Ida.)	5500	48	12.8	c			
Rodeo Flat (Nev.)	6800	42	11.0	c			
Taylor Canyon (Nev.)	6200	48	15.1	c			
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	6/1	12.8	16.3	14.9
Dooley Mountain	5430	36	9.2	6/1	4.8	5.2	5.5
Emigrant Springs	3925	48	22.3	6/1	19.6	20.8	20.0
Ladd Summit	3730	48	18.9	b		13.4	11.5
Moss Springs	5850	36	25.8	b		16.3	- -
Tollgate	5070	48	23.6	5/29	14.4	18.3	19.7
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	6/1	11.0	13.7	12.5
Emigrant Springs	3925	48	22.3	6/1	19.6	20.8	20.0
Tollgate	5070	48	23.6	5/29	14.4	18.3	19.7
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	6/1	11.0	13.7	12.5
Beech Creek	4800	48	21.3	b		19.0	16.0
Blue Mountain Spring	5900	42	16.9	b		10.6	13.3
Blue Mountain Summit	5100	36	16.8	6/1	12.8	16.3	14.9
Derr	5670	24	9.0	5/30	8.0	- -	- -
Marks Creek	4540	36	14.1	5/25	11.4	13.0	13.2
Snow Mountain	6300	48	16.7	5/29	15.9	15.7	15.5
Starr Ridge	5150	36	10.6	b		10.5	10.3
Williams Ranch	4500	42	17.9	b		15.8	15.5
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	5/30	8.0	- -	- -
Marks Creek	4540	36	14.1	5/25	11.4	13.0	13.2
Snow Mountain	6300	48	16.7	5/29	15.9	15.7	15.5
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	6/4	13.7	14.2	- -
KLAMATH WATERSHEDS							
Quartz Mountain	5230	48	15.3	b		10.0	9.5



## BASIC DATA SUPPLEMENT 2

JUNE 1, 1973

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	b		- -	12.6
Quartz Mountain	5230	48	15.3	b		10.0	9.5
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	b		10.6	13.3
Fish Creek	7900	48	15.0	b		12.0	- -
Silvies	6900	48	16.4	b		16.1	- -
Snow Mountain	6300	48	16.7	5/29	15.9	15.7	15.5
Starr Ridge	5150	36	10.6	b		10.5	10.3
Willow-Bald	5000	24	6.6	5/29	5.9	5.6	5.3

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# BASIC DATA SUPPLEMENT 3

JUNE 1, 1973

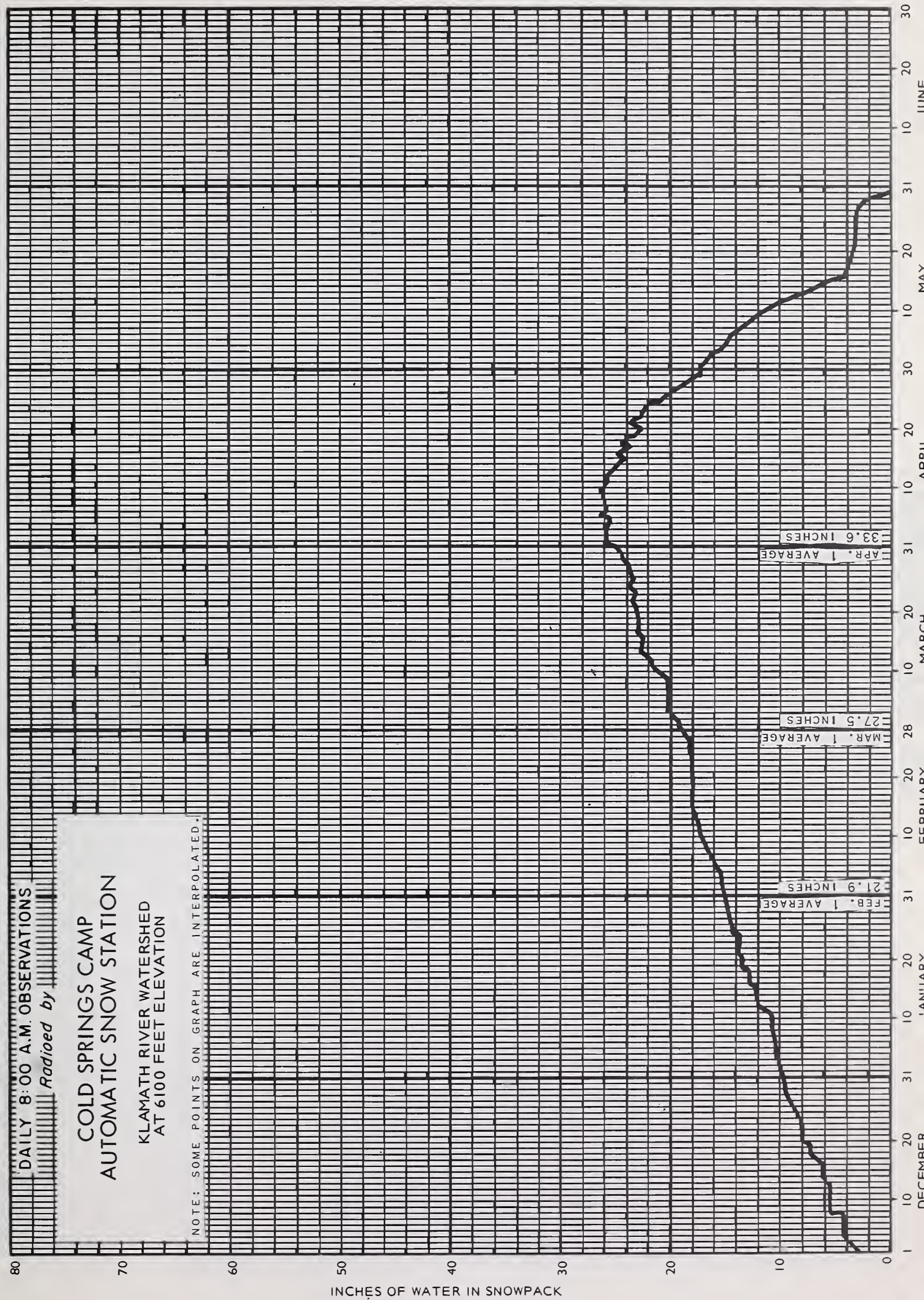
## PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average <sup>i</sup>
Derr (Wheeler County)	5800	3/27 to 5/30/73	1.90	- -	
<p>(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&amp;L Co. or USBR records. (m) Average for 5 or more years in base period.</p>					



# BASIC DATA SUPPLEMENT 4

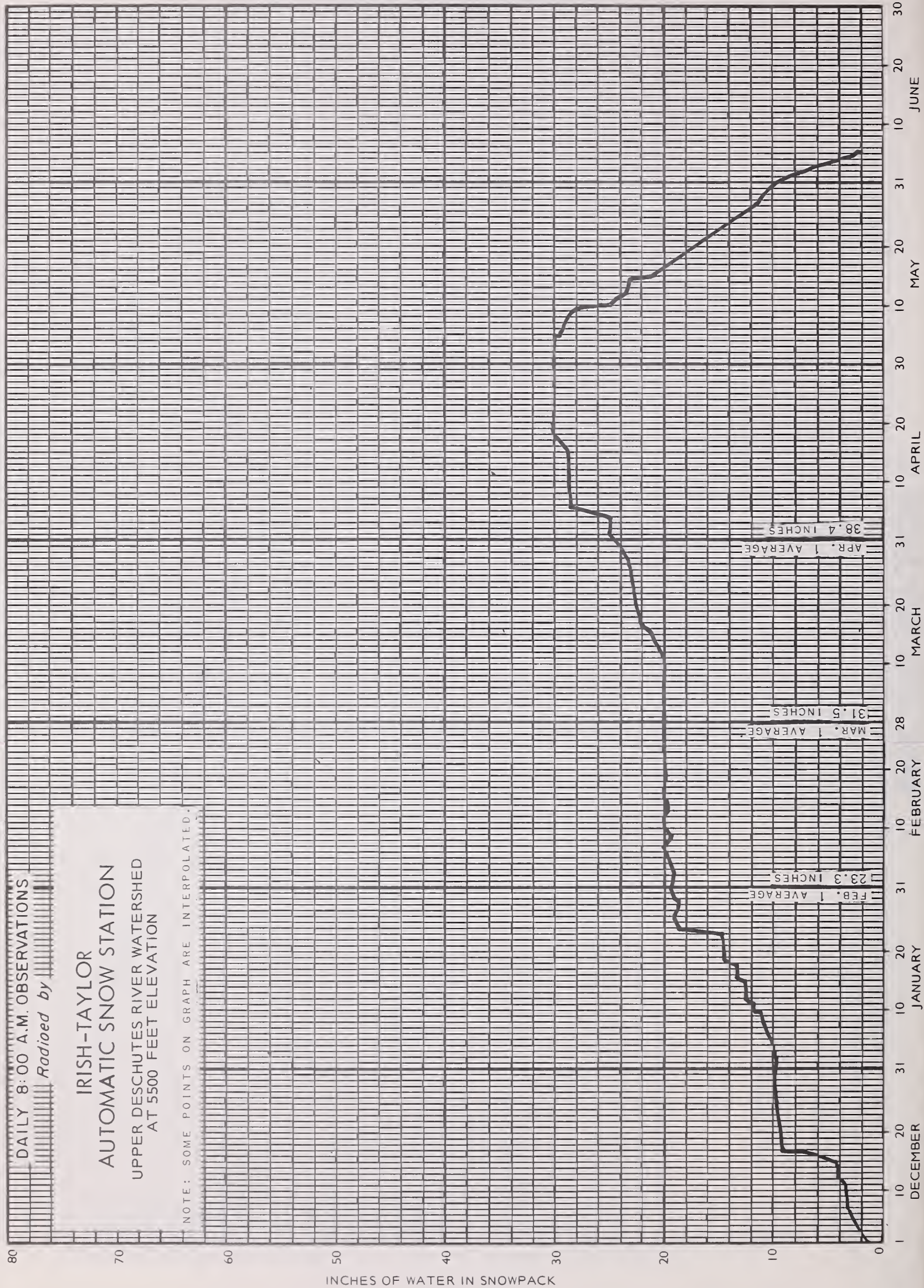
U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION





# BASIC DATA SUPPLEMENT 4

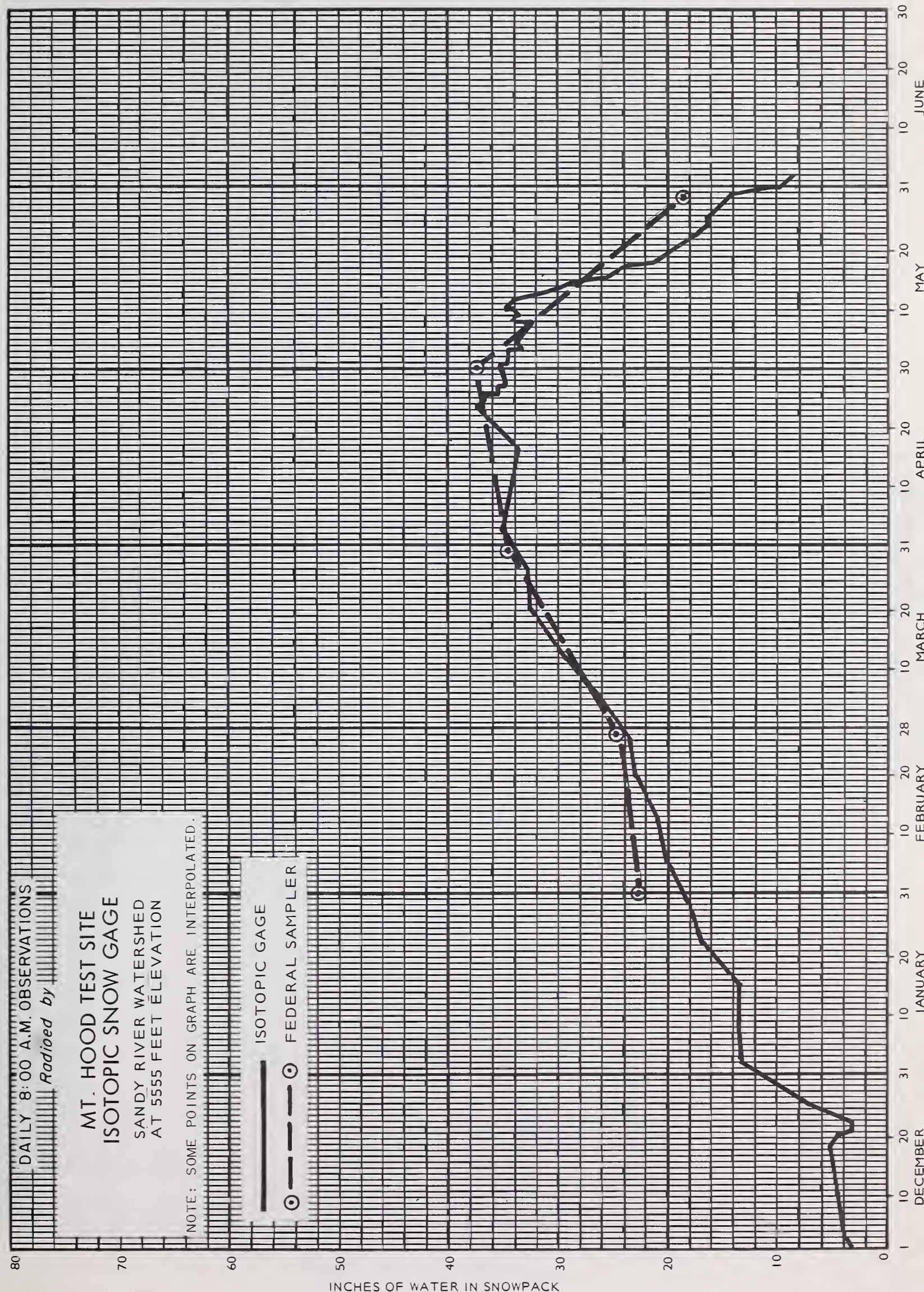
U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION





# BASIC DATA SUPPLEMENT 4

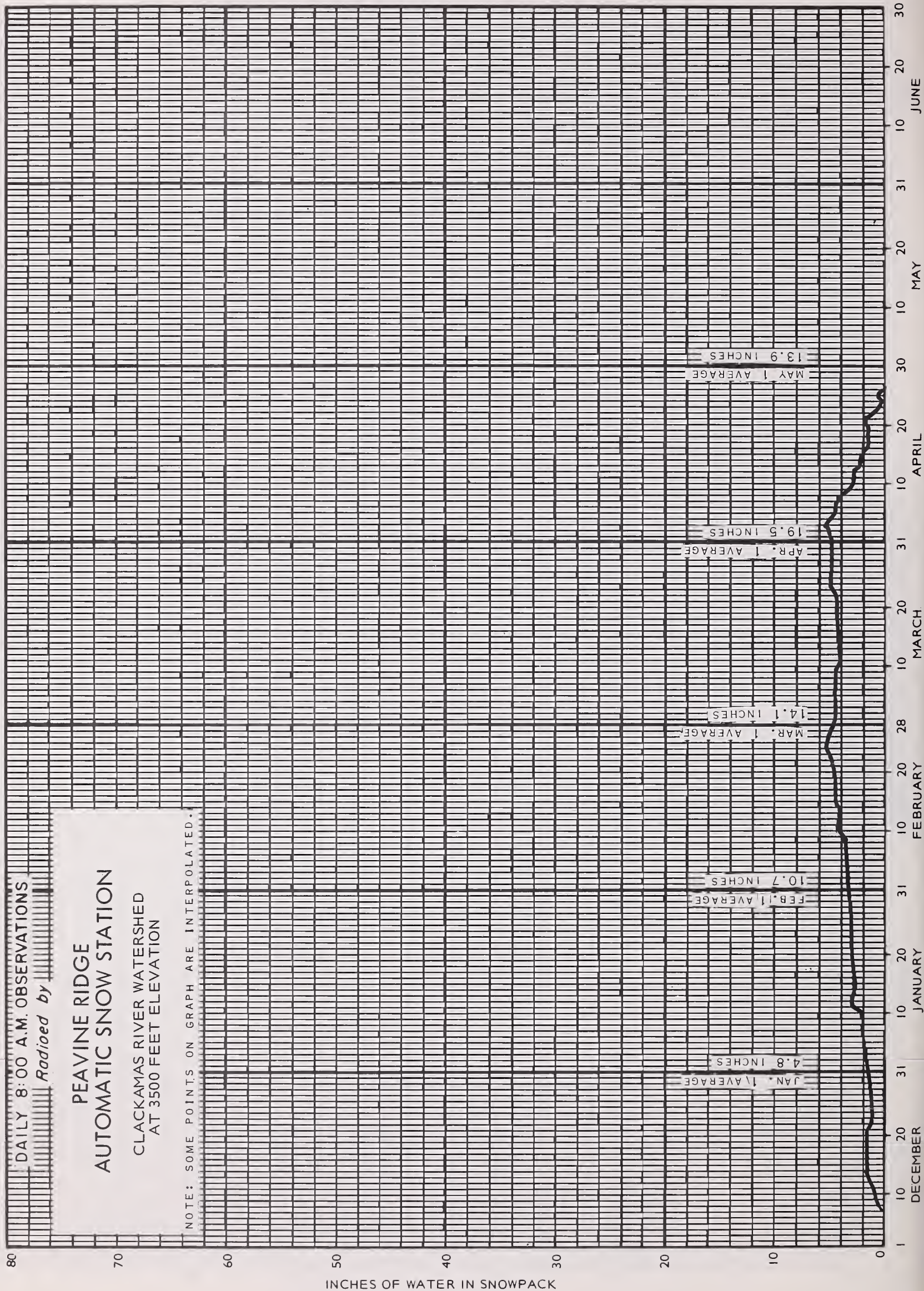
U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION





# BASIC DATA SUPPLEMENT 4

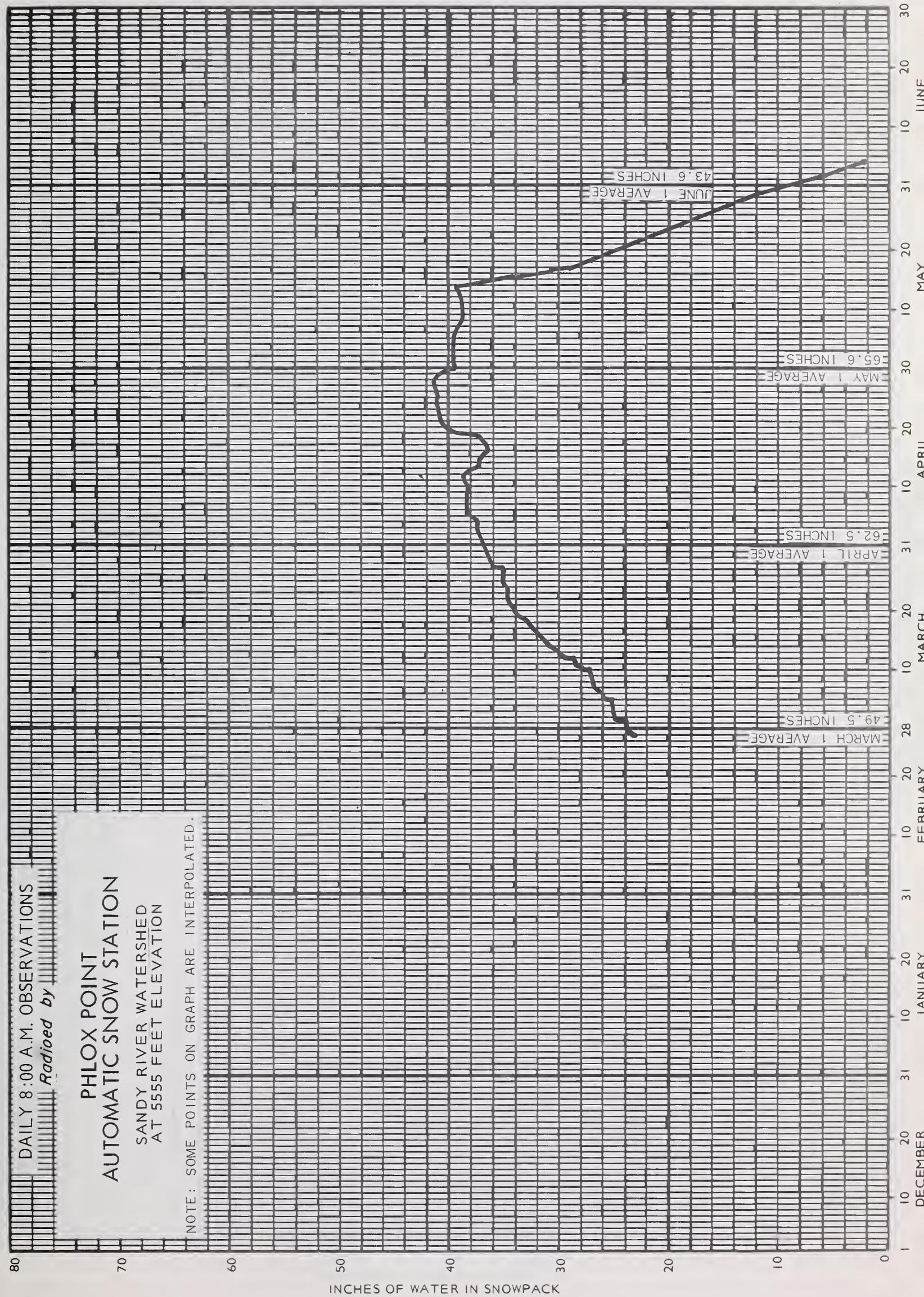
U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION





# BASIC DATA SUPPLEMENT 4

U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION





# BASIC DATA SUPPLEMENT 4

U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION

DAILY 8:00 A.M. OBSERVATIONS

Radioed by

SADDLE MOUNTAIN  
AUTOMATIC SNOW STATION  
TUALATIN RIVER WATERSHED  
AT 3250 FEET ELEVATION

NOTE: SOME POINTS ON GRAPH ARE INTERPOLATED.

INCHES OF WATER IN SNOWPACK

10 20  
DECEMBER

0 20  
JANUARY

10 20  
FEBRUARY

20 MARCH

APRIL

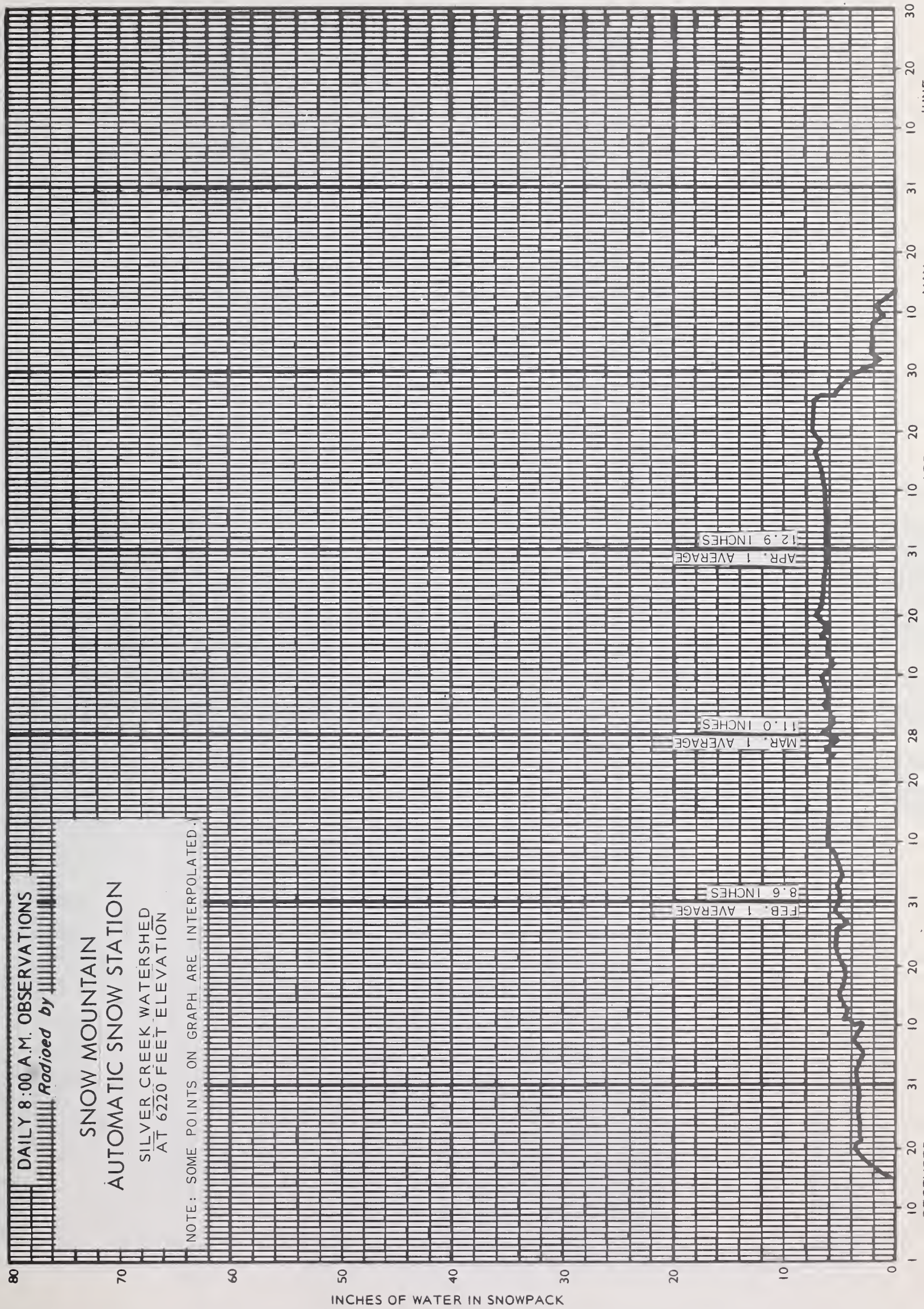
MAY

JUNE



# BASIC DATA SUPPLEMENT 4

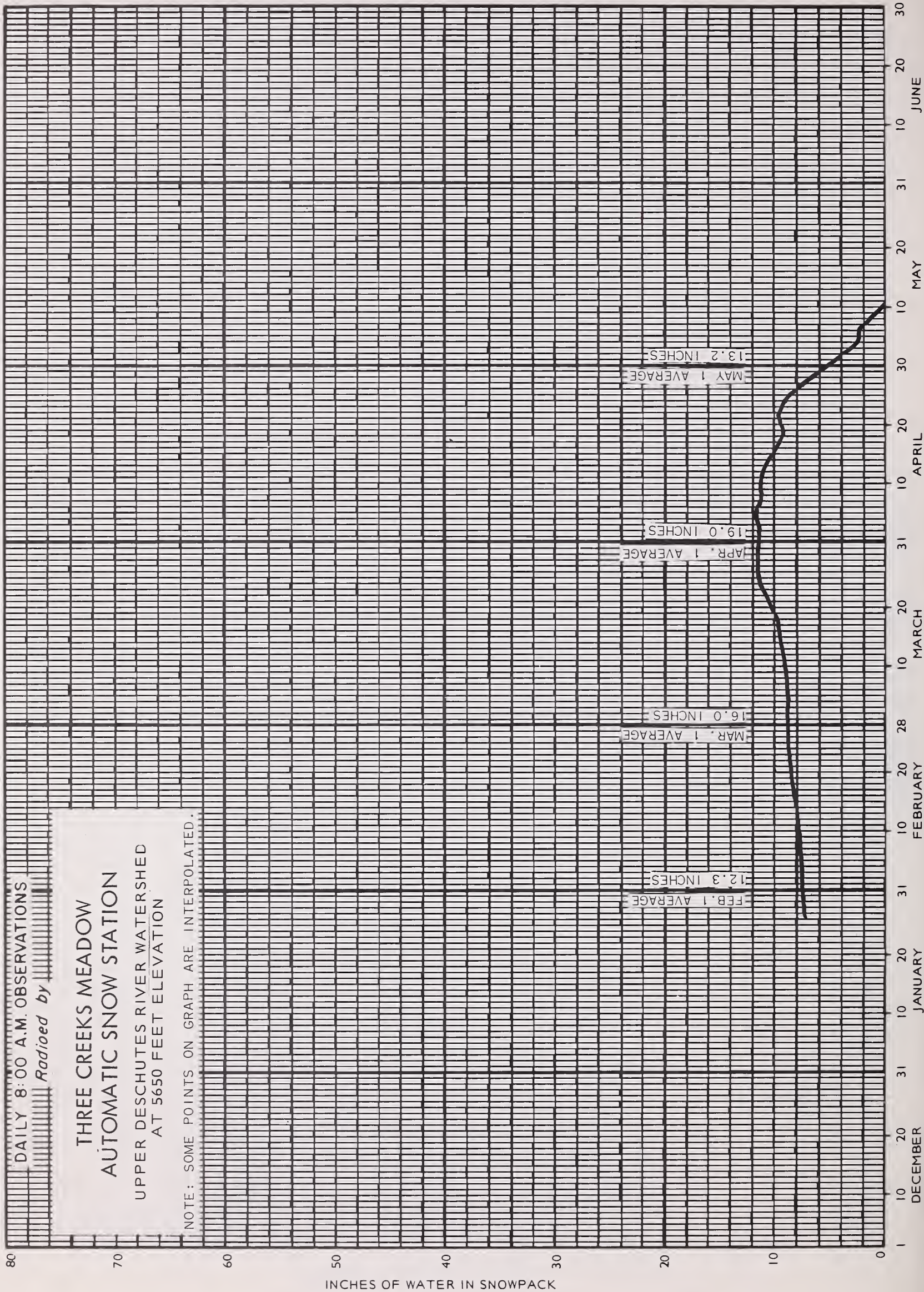
**U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION**





# BASIC DATA SUPPLEMENT 4

U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION





# Appendix 1

## PREVIOUSLY UNPUBLISHED OREGON SNOW SURVEY DATA 1972-73 Season

<u>SNOW COURSE</u> <u>Name</u>	<u>No.</u>	<u>Date</u>	<u>Depth</u> <u>(In.)</u>	<u>Water</u> <u>(In.)</u>
Butte Creek Summit	20E4	1/13/73	6	1.4
		4/13/73	0	0.0
Cascade Summit	22F3	1/15/73	26	7.8
		2/14/73	44	12.5
		3/13/73	50	15.8
		4/13/73	38	15.2
Champion	22F9	1/12/73	19	4.7
		2/14/73	36	11.7
		3/14/73	43	15.3
		4/12/73	40	17.6
Cooper Spur	21D25	11/1/72	T	T
		11/15/72	0	0.0
		12/15/72	8	0.9
		1/15/73	T	T
		2/16/73	21	5.5
		3/15/73	15	5.7
		4/16/73	T	T
Detroit City	22E1	1/15/73	0	0.0
		2/15/73	0	0.0
		3/15/73	0	0.0
		4/13/73	0	0.0
Detroit Dam	22E2	1/15/73	0	0.0
		2/15/73	0	0.0
		3/15/73	0	0.0
		4/13/73	0	0.0
Gerber	21G4	11/1/72	0	0.0
		11/15/72	0	0.0
		12/1/72	0	0.0
		12/15/72	7	1.0
		1/15/73	0	0.0
		2/15/73	6	2.0
		3/14/73	0	0.0
		4/13/73	0	0.0
Golden Curry Creek	22F10	1/12/73	T	T
		2/14/73	0	0.0
		3/14/73	T	T
		4/12/73	0	0.0



SNOW COURSE Name	No.	Date	Depth (In.)	Water (In.)
Hogg Pass	21E6	1/15/73	21	6.5
		2/15/73	42	11.9
		3/15/73	50	16.5
		4/13/73	38	15.4
Lake of the Woods	22G15	1/11/73	12	3.4
		2/12/73	16	4.9
		3/14/73	16	5.6
		4/13/73	12	3.9
Layng Creek	22F13	1/12/73	0	0.0
		2/14/73	0	0.0
		3/14/73	0	0.0
		4/12/73	0	0.0
Lookout Point Dam	22F8	1/15/73	0	0.0
		2/14/73	0	0.0
		3/13/73	0	0.0
		4/13/73	0	0.0
Lund Park	22F12	1/12/73	0	0.0
		2/14/73	0	0.0
		3/14/73	0	0.0
		4/12/73	0	0.0
Marion Forks	21E4	1/15/73	6	1.8
		2/15/73	11	3.2
		3/15/73	T	T
		4/13/73	0	0.0
McCredie Springs	22F6	1/15/73	0	0.0
		2/14/73	0	0.0
		3/13/73	0	0.0
		4/13/73	0	0.0
Mill City	22E3	1/15/73	0	0.0
		2/15/73	0	0.0
		3/15/73	0	0.0
		4/13/73	0	0.0
Mt. Hood Test Site		1/31/73	70	22.7
		2/27/73	68	24.8
		3/30/73	92	34.5
		4/30/73	83	37.2
Oakridge	22F7	1/15/73	0	0.0
		2/14/73	0	0.0
		3/13/73	0	0.0
		4/13/73	0	0.0

<u>SNOW COURSE</u> <u>Name</u>	<u>No.</u>	<u>Date</u>	<u>Depth</u> <u>(In.)</u>	<u>Water</u> <u>(In.)</u>
Parkdale	21D23	11/1/72	0	0.0
		11/15/72	0	0.0
		12/15/72	8	1.0
		1/15/73	0	0.0
		2/16/73	T	T
		3/15/73	0	0.0
		4/13/73	0	0.0
Quartz Mountain	20G6	1/16/73	1	0.1
		3/14/73	14	4.9
		4/13/73	0	0.0
Quartz Mtn. (Ext.)	20G6	1/16/73	1	0.1
		3/14/73	14	5.0
		4/13/73	0	0.0
Railroad Overpass	22F5	1/15/73	0	0.0
		2/14/73	0	0.0
		3/13/73	0	0.0
		4/13/73	0	0.0
Saddle Mountain (Telemetry)	23D1	3/21/73		1.2
		4/15/73		0.0
		5/15/73		0.0
Salt Creek Falls	22F4	1/15/73	5	1.8
		2/14/73	15	4.5
		3/13/73	18	5.3
		4/13/73	13	4.8
Santiam Junction	21E5	1/15/73	13	3.8
		2/15/73	24	8.1
		3/15/73	18	5.8
		4/13/73	0	0.0
Seine Creek (Telemetry)	23D2	5/15/73		0.0
Siskiyou Summit	22G20	1/11/73	11	1.8
		2/14/73	11	3.5
		3/15/73	T	T
		4/13/73	0	0.0
Siskiyou Sum. Alternate	22G20	1/11/73	9	1.3
		2/14/73	9	2.6
		3/15/73	4	1.1
		4/13/73	0	0.0



SNOW COURSE			Depth	Water
<u>Name</u>	<u>No.</u>	<u>Date</u>	<u>(In.)</u>	<u>(In.)</u>
Upper Valley	21D24	11/1/72	0	0.0
		11/15/72	0	0.0
		12/15/72	9	1.0
		1/15/73	0	0.0
		2/16/73	9	2.2
		3/15/73	0	0.0
		4/13/73	0	0.0
Weaver Creek	22F11	1/12/73	0	0.0
		2/14/73	0	0.0
		3/14/73	0	0.0
		4/12/73	0	0.0
Whitewater Bridge	21E3	1/15/73	4	1.0
		2/15/73	T	T
		3/15/73	0	0.0
		4/13/73	0	0.0
<u>PP&amp;L SNOW COURSES</u>				
Chiloquin	3	2/15/73	0	0.0
		4/13/73	0	0.0
Crystal	4	1/13/73	7	4.5
		2/14/73	17	6.2
		4/13/73	0	0.0
Fort Klamath	5	1/15/73	T	T
		4/13/73	0	0.0
Harriman	8	1/15/73	6	0.5
		4/13/73	0	0.0
Kirk	6	1/15/73	6	1.6
		4/13/73	0	0.0

SOIL MOISTURE  
PREVIOUSLY UNPUBLISHED

SOIL MOISTURE STATION Name	No.	Date	SOIL MOISTURE This Year
Battle Mountain Summit	18D12	6/28/72	12.8
		10/30/72	9.9
		12/1/72	10.1
Beech Creek	19E2	6/28/72	15.5
		7/31/72	11.7
		9/1/72	9.7
		10/30/72	8.3
		12/1/72	10.0
Blue Mountain Springs	18E16	6/28/72	8.5
		9/1/72	4.9
		10/30/72	5.3
		12/1/72	6.5
Blue Mountain Summit	18E13	10/30/72	8.2
		11/28/72	9.7
Camas Creek	20G8	7/28/72	8.5
		9/7/72	8.3
		11/1/72	10.7
		11/30/72	9.0
Cooper Spur	20D25	7/3/72	13.7
		8/4/72	6.0
		9/1/72	3.9
		11/1/72	5.3
		11/15/72	7.2
		12/1/72	9.9
		12/15/72	11.5
		1/15/73	14.1
		2/16/73	14.1
		3/15/73	14.2
Crane Prairie	18D19	4/16/73	14.3
		6/28/72	16.6
		7/31/72	14.7
		9/1/72	14.7
		10/30/72	14.8
Derr	19E3	12/1/72	15.1
		11/1/72	4.8
		11/13/72	5.1



SOIL MOISTURE STATION Name	No.	Date	SOIL MOISTURE This Year
Dooley Mountain	17E1	10/30/72 11/28/72	2.4 2.8
Emigrant Springs	18D4	10/25/72 12/1/72	15.9 17.2
Fish Creek	18G2	6/30/72 8/12/72 11/2/72	11.4 7.8 9.0
Ladd Summit	17D12	7/7/72 10/31/72 12/1/72	12.4 11.4 10.8
Marks Creek	20E1	9/2/72 10/27/72 11/28/72	8.9 9.0 9.2
Moss Springs	17D6	7/7/72 10/31/72 12/1/72	14.2 12.6 17.2
Quartz Mountain	20G6	12/1/72	6.8
Silvies	18G1	6/30/72 8/12/72 11/2/72	15.4 12.9 12.9
Snow Mountain	19F1	10/30/72	11.0
Starr Ridge	19E7	6/28/72 7/31/72 9/1/72 10/30/72 12/1/72	8.6 7.6 7.3 7.4 8.1
Tollgate	18D3	6/23/72 11/1/72 12/14/72	16.1 11.3 14.2
Williams Ranch	18E25	6/28/72 7/31/72 9/1/72 10/30/72 12/1/72	15.5 15.2 14.6 15.0 16.5
Willow-Bald	19F4	10/30/72 11/29/72	4.2 4.5

ERRATA: 1973 SNOW MEASUREMENTS PUBLISHED IN ERROR

<u>SNOW COURSE</u> <u>Name</u>	<u>No.</u>	<u>Date</u>	<u>Depth</u> <u>(In.)</u>	<u>Water</u> <u>(In.)</u>
Call Meadows (Aerial)	18F7			
Previously Published		4/3/73	4	1.4
Correct Data		4/3/73	4	1.1
Irish-Taylor (Telemetry)	21F6			
Previously Published		4/2/73	-	25.9
Correct Data		4/2/73	-	24.9
Logan Valley (Aerial)	18E22			
Previously Published		2/23/73	21	5.8
Correct Data		2/23/73	21	5.9
Peavine Ridge (Telemetry)	21D14			
Previously Published		4/2/73	-	5.8
Correct Data		4/2/73	-	4.9
Tipton	18E9			
Previously Published		4/2/73	21	7.6
Correct Data		3/30/73	21	7.6
Tipton (Manometer)	18E9			
Previously Published		4/2/73	-	10.8
Correct Data		3/30/73	-	10.8

ERRATA: 1973 SOIL MOISTURE MEASUREMENTS PUBLISHED IN ERROR

<u>SOIL MOISTURE STATION</u> <u>Name</u>	<u>No.</u>	<u>Date</u>	<u>SOIL MOISTURE</u> <u>This Year</u>
Starr Ridge	19E7		
Previously Published		2/28/73	9.3
Correct Data		2/28/73	9.0



## Appendix 2

SNOW SURVEYS AT RADIO TELEMETRY SITES  
for Calibration Purposes

<u>TELEMETRY SITE</u> <u>Name</u>	<u>No.</u>	<u>Date</u>	<u>Depth</u> <u>(In.)</u>	<u>Water</u> <u>(In.)</u>
Blue Mountain Springs	18E16	12/29/72	21	4.8
		1/30/73	32	9.5
		2/27/73	34	10.8
		3/29/73	32	11.2
		4/30/73	6	2.2
Fish Creek	18G2	2/23/73	57	20.8
High Ridge	18D19	1/2/73	41	9.4
		2/27/73	49	17.2
		4/23/73	38	15.8
Mt. Hood Test Site		1/31/73	70	22.7
		2/27/73	68	24.8
		3/30/73	92	34.5
		4/30/73	83	37.2
Silvies	18G1	2/23/73	36	12.8
Snow Mountain	19F1	1/31/73	27	5.7
		2/27/73	25	7.0
		3/29/73	27	7.7
Summer Rim	20G2	3/5/73	41	13.0
		3/28/73	42	12.7
Three Creek Meadow	21E13	3/27/73	32	11.2
Tipton	18E9	12/29/72	18	3.0
		1/30/73	27	7.0
		2/26/73	29	8.3
		3/30/73	26	9.0
		4/30/73	13	4.0